#2

DATE: 07/24/2001

OIPE

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PATENT APPLICATION: US/09/899,059
                                                           TIME: 10:41:34
                     Input Set : A:\PF141P7.txt
                     Output Set: N:\CRF3\07242001\I899059.raw
      2 <110> APPLICANT: Yu, Guo-Liang
             Ni, Jian
      4
             Rosen, Craig A.
             Zhang, Jun
      7 <120> TITLE OF INVENTION: Tumor Necrosis Factor Gamma
                                                                    ENTERED
      9 <130> FILE REFERENCE: PF141P7
C--> 11 <140> CURRENT APPLICATION NUMBER: US/09/899,059
    12 <141> CURRENT FILING DATE: 2001-07-06
    14 <150> PRIOR APPLICATION NUMBER: 60/278,449
    15 <151> PRIOR FILING DATE: 2001-03-26
    17 <150> PRIOR APPLICATION NUMBER: 60/216,879
    18 <151> PRIOR FILING DATE: 2000-07-07
    20 <150> PRIOR APPLICATION NUMBER: 09/559,290
    21 <151> PRIOR FILING DATE: 2000-04-27
    23 <150> PRIOR APPLICATION NUMBER: 60/180,908
    24 <151> PRIOR FILING DATE: 2000-02-08
     26 <150> PRIOR APPLICATION NUMBER: 60/134,067
    27 <151> PRIOR FILING DATE: 1999-05-13
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     53 <160> NUMBER OF SEQ ID NOS: 30
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RAW SEQUENCE LISTING

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66 <220> FEATURE:

70 <220> FEATURE:

55 <170> SOFTWARE: PatentIn Ver. 2.0

60 <213> ORGANISM: Homo sapiens

64 <222> LOCATION: (783)..(1304)

67 <221> NAME/KEY: mat_peptide 68 <222> LOCATION: (864)..(1304)

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77 <223> OTHER INFORMATION: n equals a, t, g, or c
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80 <221> NAME/KEY: misc feature
81 <222> LOCATION: (2273)
82 <223> OTHER INFORMATION: n equals a, t, g, or c
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109 gacagtgcag aaggatatgt tagaacccac tgaaaaccta gaaggttgaa aaggaagcat 180
111 accetectga cetataagaa aatttteagt etgeaggggg atateettgt ggeecaagae 240
113 attggtgtta tcatttgact aagaggaaat tatttgtggt gagctctgag tgaggattag 300
115 gaccagggag atgccaagtt tctatcactt acctcatgcc tgtaagacaa gtgttttgtt 360
117 ccaattgatg aatggggaga aaacagttca gccaatcact tatgggcaca gaatggaatt 420
119 tgaaqggtct ggtgcctgcc cttgtcatac gtaaacaaga gaggcatcga tgagttttat 480
121 ctgagtcatt tgggaaagga taattcttgc accaagccat tttcctaaac acagaagaat 540
123 agggggattc cttaaccttc attgttctcc aggatcatag gtctcaggat aaattaaaaa 600
125 ttttcaggtc agaccactca gtctcagaaa ggcaaagtaa tttgccccag gtcactagtc 660
127 caaqatqtta ttctctttqa acaaatqtqt atqtccaqtc acatattctt cattcattcc 720
129 tocccaaage agtttttage tgttaggtat attegateae tttagtetat tttgaaaatg 780
131 at atg aga cgc ttt tta agc aaa gtc tac agt ttc cca atg aga aaa
       Met Arg Arg Phe Leu Ser Lys Val Tyr Ser Phe Pro Met Arg Lys
132
                                   -20
               -25
135 tta atc ctc ttt ctt gtc ttt cca gtt gtg aga caa act ccc aca cag
136 Leu Ile Leu Phe Leu Val Phe Pro Val Val Arg Gln Thr Pro Thr Gln
           -10
                                 -5
                                                 -1
139 cac ttt aaa aat cag ttc cca gct ctg cac tgg gaa cat gaa cta ggc
140 His Phe Lys Asn Gln Phe Pro Ala Leu His Trp Glu His Glu Leu Gly
                                             15
```

RAW SEQUENCE LISTING DATE: 07/24/2001 PATENT APPLICATION: US/09/899,059 TIME: 10:41:34

Input Set : A:\PF141P7.txt

Output Set: N:\CRF3\07242001\1899059.raw

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	143	cta	acc	ttc	acc	aaα	aac	cga	atα	aac	tat	acc	aac	aaa	ttc	cta	cta	971
					Thr													
	145					25		3			30			4		35		
		atc	cca	gag	tcg	gga	gac	tac	ttc	att	tac	tcc	caq	qtc	aca	ttc	cqt	1019
	148	Ile	Pro	Glu	Ser	Ğĺv	Āsp	Tyr	Phe	Ile	Tyr	Ser	Gln	Val	Thr	Phe	Arg	
	149				40	_	•	-		45	-				50		-	
		aaa	atα	acc	tct	gag	tac	agt	gaa	atc	aga	caa	qca	qqc	cqa	cca	aac	1067
					Ser													
	153	_		55			-		60		_			65				
	155	aag	cca	gac	tcc	atc	act	gtg	gtc	atc	acc	aag	gta	aca	gac	agc	tac	1115
	156	Lys	Pro	Āsp	Ser	Ile	Thr	Val	Val	Ile	Thr	Lys	Val	Thr	Asp	Ser	Tyr	
	157	_	70					75					80					
	159	cct	gag	cca	acc	cag	ctc	ctc	atg	ggg	acc	aag	tct	gta	tgc	gaa	gta	1163
	160	Pro	Glu	Pro	Thr	Gln	Leu	Leu	Met	Gly	Thr	Lys	Ser	Val	Cys	Glu	Val	
	161	85					90					95					100	
					tgg													1211
		Gly	Ser	Asn	Trp	Phe	Gln	Pro	Ile	Tyr	Leu	Gly	Ala	Met	Phe		Leu	
	165					105					110					115		
	167	caa	gaa	ggg	gac	aag	cta	atg	gtg	aac	gtc	agt	gac	atc	tct	ttg	gtg	1259
		Gln	Glu	Gly	Asp	Lys	Leu	Met	Val		Val	Ser	Asp	Ile		Leu	Val	
	169				120					125					130			
					aaa													1304
		Asp	Tyr		Lys	Glu	Asp	Lys		Phe	Phe	GLy	Ala		Leu	Leu		
	173			135					140					145				1264
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																	ccaca	
																	tactg gttgga	
																	actcg	
																	agtggt	
																	agtcc	
																	tttcc	
																	gaatgt	
	193	tcac	cacac	таа	aaaat	.t.aat	t ti	tcato	atcat	. cta	acad	cata	tgag	raaaa	aac .	tacct	ttctt	1904
	195	tta	attat	tat	acaca	agata	at c	taaat	taaqo	g aad	gttť	gagt	ttca	acato	gta :	tatco	ccaaat	1964
	197	acaa	acaqt	ttq	cttqt	atto	ca gi	tagad	gtttt	cti	gcc	cacc	tatt	ttgi	igc :	tgggt	tctac	2024
	199	ctta	aacco	cag	aagad	cacta	at ga	aaaaa	acaaq	g aca	agact	tcca	ctca	aaaat	ttt :	atat	gaacac	2084
																	agtctt	
																	ggtgga	
																	ctact	
₹₩																	aggagg	
57>	209	ccg	aggca	aga.	anaat	ttnct	tt ga	aact	gggg	a ggo	caga	ggtt	gcg	gtga	gec ·	cagai	rcgcgc	2384
							gt aa	acaa	gagca	a aaa	actc	tgtc	caaa	aaaa	aaa	aaaaa	aaaa	2442
					D NO													
					H: 1	/ 4												
					PRT			,										
		<213> ORGANISM: Homo sapiens <400> SEQUENCE: 2																
							0	T	₹7~ T	Π~	C~~	Dha	D~~	Mo+	7\ ~~ ~	Luc	Len	
-	219	мет	Arg	Arg	Phe	ьeu	ser	ьys	val	ıyr	ser	rne	LIO	net	Arg	тÃр	ы∈и	

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Input Set : A:\PF141P7.txt

Output Set: N:\CRF3\07242001\I899059.raw

```
-20
         -25
222 Ile Leu Phe Leu Val Phe Pro Val Val Arg Gln Thr Pro Thr Gln His
223 -10 -5 -1 1
225 Phe Lys Asn Gln Phe Pro Ala Leu His Trp Glu His Glu Leu Gly Leu
    10
                                 1.5
226
228 Ala Phe Thr Lys Asn Arg Met Asn Tyr Thr Asn Lys Phe Leu Leu Ile
229 25
                              30
231 Pro Glu Ser Gly Asp Tyr Phe Ile Tyr Ser Gln Val Thr Phe Arg Gly
232 40
                           4.5
234 Met Thr Ser Glu Cys Ser Glu Ile Arg Gln Ala Gly Arg Pro Asn Lys
                       60
237 Pro Asp Ser Ile Thr Val Val Ile Thr Lys Val Thr Asp Ser Tyr Pro
240 Glu Pro Thr Gln Leu Leu Met Gly Thr Lys Ser Val Cys Glu Val Gly
                              95 100
243 Ser Asn Trp Phe Gln Pro Ile Tyr Leu Gly Ala Met Phe Ser Leu Gln
244 105 110 115
246 Glu Gly Asp Lys Leu Met Val Asn Val Ser Asp Ile Ser Leu Val Asp
247 120 125 130
249 Tyr Thr Lys Glu Asp Lys Thr Phe Phe Gly Ala Phe Leu Leu
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250 135
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254 <212> TYPE: PRT
255 <213> ORGANISM: Homo sapiens
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259 1 5
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261 Leu Pro Lys Lys Thr Gly Gly Pro Gln Gly Ser Arg Arg Cys Leu Phe
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262 20
264 Leu Ser Leu Phe Ser Phe Leu Ile Val Ala Gly Ala Thr Thr Leu Phe
                           40
267 Cys Leu Leu His Phe Gly Val Ile Gly Pro Gln Arg Glu Glu Ser Pro
                        55
270 Arg Asp Leu Ser Leu Ile Ser Pro Leu Ala Gln Ala Val Arg Ser Ser
                    70
                                     75
273 Ser Arg Thr Pro Ser Asp Lys Pro Val Ala His Val Val Ala Asn Pro
                                  90
                 8.5
276 Gln Ala Glu Gly Gln Leu Gln Trp Leu Asn Arg Arg Ala Asn Ala Leu
                             105
277 100
279 Leu Ala Asn Gly Val Glu Leu Arg Asp Asn Gln Leu Val Val Pro Ser
                          120
280 115
282 Glu Gly Leu Tyr Leu Ile Tyr Ser Gln Val Leu Phe Lys Gly Gln Gly
                       135
285 Cys Pro Ser Thr His Val Leu Leu Thr His Thr Ile Ser Arg Ile Ala
                   150 . 155 . 160
288 Val Ser Tyr Gln Thr Lys Val Asn Leu Leu Ser Ala Ile Lys Ser Pro
                165 170
291 Cys Gln Arg Glu Thr Pro Glu Gly Ala Glu Ala Lys Pro Trp Tyr Glu
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Input Set : A:\PF141P7.txt

Output Set: N:\CRF3\07242001\I899059.raw

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185
292
               180
294 Pro Ile Tyr Leu Gly Gly Val Phe Gln Leu Glu Lys Gly Asp Arg Leu
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297 Ser Ala Glu Ile Asn Arg Pro Asp Tyr Leu Asp Phe Ala Glu Ser Gly
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    210
300 Gln Val Tyr Phe Gly Ile Ile Ala Leu
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303 <210> SEQ ID NO: 4
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305 <212> TYPE: PRT
306 <213> ORGANISM: Homo sapiens
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312 Leu His Leu Leu Leu Gly Leu Leu Leu Val Leu Leu Pro Gly Ala
                                   25
               20
315 Gln Gly Leu Pro Gly Val Gly Leu Thr Pro Ser Ala Ala Gln Thr Ala
316 35
                               40
318 Arg Gln His Pro Lys Met His Leu Ala His Ser Thr Leu Lys Pro Ala
321 Ala His Leu Ile Gly Asp Pro Ser Lys Gln Asn Ser Leu Leu Trp Arg
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324 Ala Asn Thr Asp Arg Ala Phe Leu Gln Asp Gly Phe Ser Leu Ser Asn
                                      90
327 Asn Ser Leu Leu Val Pro Thr Ser Gly Ile Tyr Phe Val Tyr Ser Gln
                                       110
328 100
                                 105
330 Val Val Phe Ser Gly Lys Ala Tyr Ser Pro Lys Ala Pro Ser Ser Pro
331 115
                             120
                                         125
333 Leu Tyr Leu Ala His Glu Val Gln Leu Phe Ser Ser Gln Tyr Pro Phe
       130
                          135
                                             140
336 His Val Pro Leu Leu Ser Ser Gln Lys Met Val Tyr Pro Gly Leu Gln
                      150
                                         155
337 145
339 Glu Pro Trp Leu His Ser Met Tyr Hìs Gly Ala Ala Phe Gln Leu Thr
                                      170
                  165
342 Gln Gly Asp Gln Leu Ser Thr His Thr Asp Gly Ile Pro His Leu Val
                                  185
                                                     190
345 Leu Ser Pro Ser Thr Val Phe Phe Gly Ala Phe Ala Leu
346 195
                              200
348 <210> SEQ ID NO: 5
349 <211> LENGTH: 244
350 <212> TYPE: PRT
351 <213> ORGANISM: Homo sapiens
353 <400> SEQUENCE: 5
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357 Gly Ser Leu Leu Leu Ala Val Ala Gly Ala Thr Ser Leu Val Thr Leu
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                                  25
360 Leu Leu Ala Val Pro Ile Thr Val Leu Ala Val Leu Ala Leu Val Pro
           35
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Use of n and/or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to insure a corresponding explanation is presented in the <220> to <223> fields of each sequence using n or Xaa.

VERIFICATION SUMMARY

DATE: 07/24/2001 TIME: 10:41:35

PATENT APPLICATION: US/09/899,059

Input Set : A:\PF141P7.txt

Output Set: N:\CRF3\07242001\I899059.raw

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L:207 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
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L:549 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:557 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:559 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:665 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
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L:669 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
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L:724 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10
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L:800 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
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L:1113 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21
L:1121 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21
L:1123 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21
L:1256 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22
L:1258 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22
L:1262 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22
L:1264 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22
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L:1268 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22
L:1346 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23
L:1348 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23
L:1350 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23
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L:1358 M:341 W: (46) "n" or "Xaa" used, for SEQ ID\#:23
L:1416 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24
L:1418 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24
L:1426 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24
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VERIFICATION SUMMARY

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Input Set : A:\PF141P7.txt

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